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AMSAT NEWS SERVICE
ANS-278

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see:
http://www.amsat.org/mailman/listinfo/ans

In this edition:

* Virtual AMSAT Space Symposium and Annual General Meeting - October 17
* AMSAT-UK Colloquium Online - October 11
* ARISS Worldwide SSTV Event - October 4-8
* Happy 27th Birthday, AMRAD-OSCAR 27
* FCC Deletes 3.4 GHz Amateur Satellite Service Allocation
* Chinese Amateur Radio Satellite Launches Delayed
* VUCC Awards-Endorsements for October 2020
* Message to US Educators: ARISS Contact Opportunity - Call For Proposals
* Changes to AMSAT TLE Distribution for October 1, 2020
* Hamfests, Conventions, Maker Faires, and Other Events
* AMSAT Awards News
* Upcoming Satellite Operations
* Satellite Shorts from All Over

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ANS-278 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 278.01
From AMSAT HQ KENSINGTON, MD.
DATE October 4, 2020
To All RADIO AMATEURS
BID: $ANS-278.01

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Learn more about AMSAT's GOLF program, ARISS, AREx, the AMSAT CubeSat Simulator and other exciting projects taking place in the amateur satellite world.

The 2020 Virtual AMSAT Space Symposium and Annual General Meeting will be held on Saturday, October 17th from 9:00am CDT – 5:00pm CDT (UTC-5). Symposium presentations will be a combination of pre-recorded video segments along with question and answer sessions held via a Zoom meeting.

The Symposium will be made available for free live on AMSAT's YouTube channel.

Registered attendees will receive a digital copy of the AMSAT Symposium Proceedings and will be entitled to join the Zoom meeting. Only registered attendees will be able to participate in the question and answer sessions. Registered attendees will also be entered into prize drawings. Registration is free and available only for AMSAT members at launch.amsat.org. Registration will close on Friday, October 16th at 5:00pm CDT.

Final papers for the Symposium Proceedings must be submitted by October 5, 2020 to Dan Schultz, N8FGV, n8fgv at usa.net.

Symposium presentations should be limited to 15 minutes of pre-recorded video. Video presentations must be submitted by October 10, 2020 to Paul Stoetzer, N8HM, n8hm at arrl.net. We ask that presenters be available to take questions via Zoom following the airing of their pre-recorded video.

Tentative Schedule

9:00am CDT - Opening Remarks
9:15am CDT – 12:45pm CDT - General Presentations
1:00pm CDT – 2:00pm CDT - AMSAT Education / CubeSat Simulator
2:00pm CDT – 3:00pm CDT - ARISS (Amateur Radio on the International Space Station) / AREx (Amateur Radio Exploration)
-ARISS: 2020 Update
-Next Generation Radio System – First Element Operations and Future System Plans
-AREx/Lunar Gateway and Other Lunar Opportunities
3:00pm CDT – 4:00pm CDT - AMSAT Engineering
4:00pm CDT – 5:00pm CDT - 2020 AMSAT Annual General Meeting

[ANS thanks the 2020 AMSAT Symposium Team for the above information]

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which will take place during the event.

Among the many talks and demonstrations during the day are:

1100 BST (1000 GMT) Official opening by Martin Sweeting G3YJO
1105-1125 Amateur Radio on the International Space Station (ARISS) Update by Ciaran Morgan M0XTD
1135-1200 Decoding Mars spacecraft – Bits and pieces you can learn from spacecraft telemetry by Daniel Estévez EA4GPZ
1210-1230 Tevel FM transponder satellite constellation by David Greenberg 4X1DG
1240-1300 LUNART – A Lunar Amateur Radio Transponder Project by Peter Gülzow DB2OS
1400-1420 FUNcube next, to boldly go… creating an open platform in space by Phil Ashby M6IPX
1430-1450 QO-100 Demonstration by Mike Willis G0MJW
1500-1520 Getting Goonhilly's 32m antenna ready to support ESA missions by Matt Cosby Director of Space Engineering at Goonhilly Earth Station Ltd
1530-1550 AMSAT North America Engineering Update by Jerry Buxton N0JY
1600-1620 LEO Sat demonstration by Drew Glasbrenner KO4MA

Please register online at http://tinyurl.com/amsatukreg2020

Schedule of the day's events https://tinyurl.com/ANS-278-AUKProg

AMSAT-UK Colloquium Page https://amsat-uk.org/colloquium/

[ANS thanks AMSAT-UK for the above information]

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Happy 27th Birthday, AMRAD-OSCAR 27

Happy 27th birthday to AMRAD-OSCAR 27, still alive and operating today!

For an amateur radio satellite operator in the early 1990s, working on a satellite project based on the AMSAT Microsat design was a dream job!

The hams on the team (including Dino Lorenzini, Mark Kanawati, Steve Greene and Mike Wyrick) couldn't help but include an amateur radio payload, and were successful with the help of fellow amateurs and the local Vienna, Virginia Amateur Research and Development (AMRAD) group: Paul Renaldo, Andre Castillot, Dave Rogers, Glenn Baumgartner, Sandy Sanders, Matt Butcher, Randy Mays, and Terry Fox, and with help from AMSAT's Lyle Johnson, Chuck Green, and Jim White, among many others.

EYESAT-1/AO-27 launched (with the amateur payload and an extra UHF antenna for the downlink) at 0145 UTC September 26, 1993. [Ariane-4 V59 also launched amateur satellites KO-25, IO-26, and PO-28, SSTL's Healthsat-2, the Stella research satellite, and the Spot-3 earth observation satellite.] The satellite was commanded on during the next orbit and the first QSO on the amateur payload was made the following morning on September 27, 1993. (We think – does anyone have an archive of amsat-bb emails from 1993 who can check?)

AO-27 was the first FM "bent pipe" satellite and proved to be easy to work with a strong downlink and sensitive receiver. The amateur FM repeater has served many Hams worldwide and was one of the first "Easy Sats". AO-27 was later used for the first successful D-Star mode satellite QSO. The 800km orbit provides continent-spanning coverage. At least one station is known to have worked 49 states solely via AO-27!

And here we are today, the 27th of September, 2020, celebrating the 27th birthday of AO-27!

Thanks to Mike Wyrick N3UC who babysat the spacecraft for the last 27 years.

And thanks to all those who helped. There are many untold stories and photos we hope to share in the near future.

Current information on AO-27's operating schedule is at www.ao27.net

[ANS thanks Mark Kanawati, N4TPY, Mike Wyrick, N3UC, and Steve Greene, KS1G, for the above information]

FCC Deletes 3.4 GHz Amateur Satellite Service Allocation

At its open meeting on September 30, 2020, the Federal Communications Commission adopted a Report and Order that sunsets amateur use of the 3.3-3.5 GHz band. This spectrum includes the 3.40-3.41 GHz amateur satellite service allocation.

AMSAT had previously filed comments opposing the FCC's proposal to delete this spectrum.

The adopted Report and Order can be found at https://tinyurl.com/ANS-278-FCC

[ANS thanks Paul Stoetzer, N8HM, AMSAT Executive Vice President, for

the above information]

Chinese Amateur Radio Satellite Launches Delayed

CAMSAT says the CAS-7A launch has been postponed until next May, and CAS-5A until next June.

“Because of COVID-19, many things have been delayed,” CAMSAT’s Alan Kung, BA1DU, told ARRL. He said an announcement would be made closer to the announced launches.

CAMSAT said last spring that CAS-7A would launch in mid-September; the launch has been postponed multiple times since first announced. CAS-5A was predicted to launch in October. Both satellites will carry two transponders that include HF, in a configuration similar to that of the Russian RS satellites decades ago.

CAS-7A will be placed into a sun-synchronous orbit with an inclination of 98° at 500 kilometers above Earth. The transponders will have a bandwidth of 30 kHz. According to the IARU amateur satellite frequency coordination page, the HF/HF linear transponder will uplink on 15 meters — 21.245–21.275 MHz, and downlink on 10 meters — 29.435-21.465 MHz. A CW beacon will transmit on 29.425 MHz. The HF/UHF transponder will uplink at 21.3125–21.3275 MHz, and downlink at 435.3575–435.3725 MHz. A CW beacon for that transponder will transmit on 435.430 MHz.

The CAS-5A nanosatellite, with a 6U form factor, carries two HF transponders and two VHF/UHF transponders. While in orbit, it will deploy the tiny CAS-5B femtosatellite, which will weigh just 0.5 kilogram.

The array of CAS-5A linear transponders will include HF/HF, HF/UHF, and VHF/UHF with 30-kHz passbands (except 15 kHz for the HF/UHF transponder).

CAS-5A will include CW telemetry beacons on HF and UHF. The HF CW beacon will be at 29.465 MHz, and a UHF telemetry beacon will be at 435.57 MHz. Other beacons include the HF/HF transponder beacon at 29.490 MHz; the HF/UHF transponder beacon at 435.505 MHz, and the VHF/UHF transponder beacon at 435.540 MHz. Telemetry will be transmitted at 435.650 MHz. The V/U linear transponder will uplink at 145.820 MHz; the V/U FM transponder will uplink at 145.925 MHz. Terrestrial stations will access the transponders at 21.385 — 21.415 MHz.

[ANS thanks ARRL for the above information]

VUCC Awards-Endorsements for October 2020

Here are the endorsements and new VUCC Satellite Awards issued by the ARRL for the period September 1, 2020 through October 1, 2020. Congratulations to all those who made the list this month!

WOW! Long list again this month! Almost a record.

CALL	Sept	October	
K8YSE	1935	2007	Only 30393 to go!
N8HM	1102	1127	
N8RO	1070	1075	
K8YSE/7	671	842	

W5RKN	721	732	
WD9EWK (DM43)	617	623	
K9UO	575	600	
AD0HJ	478	500	
KE8FZT	450	475	
MI6GTY	459	460	
N7EGY	456	457	
W4ZXT	327	431	
KJ4EU	261	404	
XE2RV	262	385	
KC9UQR	351	377	
KC9VGG	336	374	
AC9O	204	359	
K5CIS	250	300	
WB7QXU	204	252	
KF6JOQ	201	251	
KB9STR	138	229	
PU4JOE	150	210	
AA8CH/N8R	113	206	
K5TA	101	202	
W8LR	149	175	
KJ4M	170	171	
N5EKO	108	152	
N7AME	148	150	
N1PEB (FN42)	New	138	
W7YED	New	127	
KO4AQF	104	126	
WB9VPG	New	116	
K1ECU	100	115	
N5BLY	New	106	
KC3KJQ	New	103	
K2KA	New	102	
N8SGZ	New	100	

If you find errors or omissions. please contact me off-list at
<mycall>@<mycall>.com and I'll revise the announcement.
This list was developed by comparing the ARRL .pdf listings
for the two months. It's a visual comparison so omissions
are possible. Apologies if your call was not mentioned.
Thanks to all those who are roving to grids that are rarely
on the birds. They are doing most of the work!

[ANS thanks Ron Parsons, W5RKN, for the above information]

Message to US Educators: ARISS Contact Opportunity - Call For
Proposals

The Amateur Radio on the International Space Station (ARISS) Program
is seeking formal and informal education institutions and
organizations, individually or working together, to host an Amateur
Radio contact with a crew member on board the ISS. ARISS anticipates
that the contact would be held between July 1, 2021 and December 30,
2021. Crew scheduling and ISS orbits will determine the exact contact
dates. To maximize these radio contact opportunities, ARISS is looking
for organizations that will draw large numbers of participants and
integrate the contact into a well-developed education plan.

The deadline to submit a proposal is November 24th, 2020. Proposal
information and more details such as expectations, proposal guidelines
and the proposal form can be found at www.ariss.org. An ARISS
Introductory Webinar session will be held on October 8, 2020 at 8
PM ET. The Eventbrite link to sign up is:

https://ariss-proposal-webinar-fall-2020.eventbrite.com

The Opportunity

Crew members aboard the International Space Station will participate in scheduled Amateur Radio contacts. These radio contacts are approximately 10 minutes in length and allow students to interact with the astronauts through a question-and-answer session.

An ARISS contact is a voice-only communication opportunity via Amateur Radio between astronauts and cosmonauts aboard the space station and classrooms and communities. ARISS contacts afford education audiences the opportunity to learn firsthand from astronauts what it is like to live and work in space and to learn about space research conducted on the ISS. Students also will have an opportunity to learn about satellite communication, wireless technology, and radio science. Because of the nature of human spaceflight and the complexity of scheduling activities aboard the ISS, organizations must demonstrate flexibility to accommodate changes in dates and times of the radio contact.

Amateur Radio organizations around the world with the support of NASA and space agencies in Russia, Canada, Japan and Europe present educational organizations with this opportunity. The ham radio organizations' volunteer efforts provide the equipment and operational support to enable communication between crew on the ISS and students around the world using Amateur Radio.

Please direct any questions to ariss.us.education at gmail.com.

[ANS thanks Dave Jordan, AA4KN, ARISS PR, for the above information]

Changes to AMSAT TLE Distribution for October 1, 2020

The following satellite has decayed from orbit and has been removed from this week's AMSAT TLE Distribution:

MO-105 - Cat ID 44832 (decay epoch = 2020-09-28 0:00 UTC per Space-Track). The UTC time is an approximation.

Note: The decay epoch predicted by Space-Track for MO-106 - Cat ID 44830 is 2020-10-15.

[ANS thanks Ray Hoad, WA5QGD, AMSAT Orbital Elements Manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

Want to see AMSAT in action or learn more about amateur radio in space?

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

Due to COVID-19, many hamfest and events around the United States have been canceled or postponed. While we make every effort to ensure the information contained below is correct, there may be some that we missed.

Clint Bradford K6LCS has booked his “Work the FM Voice Satellites With Minimal Equipment” presentation for various clubs.

10/27/2020 – Cherryland ARC / Traverse Bay ARC
TBD – Antelope Valley (CA) ARC
TBD – A private presentation for a Boy Scout troop in Danville, Pennsylvania

These will be Zoom presentations. Everyone is asked to update their copies of the Zoom application – by directly visiting Zoom.us.

[ANS thanks Robert Bankston, KE4AL, AMSAT Vice President - User Services, for the above information]

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approx 1700z, pass details closer to the trip

EL Grids, @N1PEB 10/10 -10-14: 10/10 EL95 Key Largo, 10/11 EL94 Key West, 10/12 EL84 Dry Tortuga, 10/13 EL94 Key West, 10/14 TBD

Please submit any additions or corrections to ke0pbr at gmail.com

[ANS thanks Paul Overn, KE0PBR, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. President's Club donations may be made at https://tinyurl.com/ANS-PresClub.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.

Join AMSAT today at https://launch.amsat.org/

73 and remember to help Keep Amateur Radio in Space,

This week's ANS Editor,

Paul Stoetzer, N8HM
n8hm at amsat dot org